a hearing on February 22, 2011, for the purpose of construing nine disputed terms of the Redford

patents. Having carefully reviewed the parties' claim construction briefs, heard their arguments,

and considered the relevant legal authority, and good cause appearing, the Court construes the

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4 terms as set forth below.

I. BACKGROUND

Between 1997 and 2002, Peter Redford, the president and Chief Executive Officer of TVI, obtained a family of patents relating to the integration of interactive media with printed publications such as children's books, magazines, and CD cases. The invention included a simplified way of launching multimedia applications, which then could be navigated by a remote control located within the printed publication. As relevant here, the patents disclose a method for automatically launching an application or other process upon the insertion of a disc into a peripheral of a computer system.

The shared specification notes that while "multimedia devices [had] sophisticated digital sound and full motion video capabilities which [made] such devices very suitable for entertainment and education applications in users' homes," starting a process on such devices was difficult for unsophisticated users. '532 4:41-48. After inserting a disk with multimedia content, PC users either had to launch the relevant applications manually or reboot or restart the computer to activate any automatic launching features. Users of game systems also had to reset or restart the device after inserting a game cartridge in order to start up an application.

The invention claims to solve this problem by programming the host device, such as a personal computer or other multimedia device, *id.* 8: 28-39, so that "compatible applications start up automatically, as soon as a storage media [sic] is inserted into the drive." *Id.* 4:40-41. In one embodiment, the device is programmed to check for and use "initialization files such as startup files and configuration files" during the booting process of the host device. *Id.* 22:19-21. The device then installs an autostart driver into main memory; the driver prepares the host device to detect the insertion of a storage medium. *Id.* 24-28.

The specification discusses two ways of detecting insertion of storage medium, both of which rely on "interrupts," or requests for attention to or from software or hardware. Upon

processing an interrupt indicating the presence of a storage medium in a peripheral, the autostart
driver seeks one or more files, each having a predetermined name. Id. 22:35-39. The
predetermined name, such as DISGO.BAT, is used consistently in the autostart driver and
compatible storage media. <i>Id.</i> 22:35-39. When the autostart driver detects a specified file, it
executes the instructions in that file, starting a process such as launching an application stored or
the media or retrieving and displaying certain selections contained on the media. <i>Id.</i> 23:60-24:3
Once the application has terminated, the autostart driver "continue[s] to be responsive to the
insertion of a storage media [sic] into a peripheral" of the host device. <i>Id.</i> 24:10-15. The
specification indicates that the instructions to the host device also can be issued in forms other
than the autostart driver, such as commands to the operating system. <i>Id.</i> at 36-41.
In 2002, TVI brought suit against Microsoft, alleging that the AutoPlay feature in
Microsoft's Windows operating system infringed the Redford patents. Case No. C 02-02385
(JSW) (EDL) (N.D. Cal.) (the "Microsoft case"). Microsoft attempted to invalidate the claims o
the Dedford retents board on anticipation by the Commodern CDTV. However, the count

Microsoft's Windows operating system infringed the Redford patents. Case No. C 02-02385 (JSW) (EDL) (N.D. Cal.) (the "Microsoft case"). Microsoft attempted to invalidate the claims of the Redford patents based on anticipation by the Commodore CDTV. However, the court concluded that the CDTV technology, which involved rebooting and re-initializing the system every time the user changed the inserted media, did not anticipate TVI's patents. The court found that "[r]ebooting and re-initializing the entire system after every insertion of media is not simply an additional series of steps; it is more accurately a series of operations not contemplated by the construction of TVI's claims." Chan Decl. Ex. 9 ("Microsoft Order Denying Motion for Summary Judgment on Anticipation") at 2:20-22. The parties settled the case in 2004, and Microsoft now is a licensee of the Redford patents. Pl.'s Claim Construction Brief at1:11.

Prior to the settlement, Microsoft petitioned the United States Patent and Trademark Office ("PTO") to reexamine the validity of the claims of the Redford patents in light of CDTV. The patent examiner agreed with Microsoft that the modules used by CDTV were covered under the Redford patents' definition of "initialization file." '532 Reexamination, Office Action, at 33 (Nov. 21, 2005). TVI did not dispute that "initialization file" includes modules of code in ROM. '863 Reexamination, Patent Owner's Statement, at 4 (Aug. 7, 2006). However, as it did in the *Microsoft* case, TVI distinguished its invention from CDTV on the basis of CDTV's rebooting

requirement. '307 Reexamination, Examiner, Notice of Intent to Issue Ex Parte Reexam 2 Certificate, at 3 (Oct. 24, 2008). TVI also narrowed several claims in the Redford patents to clarify that the patented method requires that the application or other process be initiated 3 4

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automatically upon insertion of the disk without rebooting or resetting the system.<sup>2</sup>

II. LEGAL STANDARD

Claim construction is a question of law to be determined by the Court. Markman v. Westview Instruments, Inc., 52 F.3d 967, 979 (Fed. Cir. 1995) (en banc), aff'd 517 U.S. 370 (1996). "Ultimately, the interpretation to be given a term can only be determined and confirmed with a full understanding of what the inventors actually invented and intended to envelop with the claim." Phillips v. AWH Corp., 415 F.3d 1303, 1316 (Fed. Cir. 2005), quoting Renishaw PLC v. Marposs Societa' per Azioni, 158 F.3d 1243, 1250 (Fed. Cir. 1998). Accordingly, a claim should be construed in a manner that "most naturally aligns with the patent's description of the invention." *Id*.

The first step in claim construction is to look to the language of the claims themselves. "It is a 'bedrock principle' of patent law that 'the claims of a patent define the invention to which the patentee is entitled the right to exclude." *Phillips*, 415 F.3d at 1312 (quoting *Innova/Pure* Water, Inc. v. Safari Water Filtration Sys., Inc., 381 F.3d 1111, 1115 (Fed. Cir. 2004)). A disputed claim term should be construed in a manner consistent with its "ordinary and customary meaning," which is "the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application." *Id.* at 1312-13. The ordinary and customary meaning of a claim term may be determined solely by viewing the term within the context of the claim's overall language. See id. at 1314 ("the use of a term within the claim provides a firm basis for construing the term."). Moreover, the use of the term in other claims may provide guidance regarding its proper

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<sup>&</sup>lt;sup>2</sup> The PTO confirmed the patentability of the asserted independent claims of the '156 patent, the '863 patents, and claim 18 of the '307 patent as the claims were originally drafted. The remaining asserted independent claims—claim 1 of the '307 patent and claims 1, 9, and 17 of the '532 patent-were narrowed to confirm that the claims preclude rebooting. Thus narrowed, the claims were determined to be patentable.

construction. *Id.* ("Other claims of the patent in question, both asserted and unasserted, can also be valuable sources of enlightenment as to the meaning of a claim term.").

A claim also should be construed in a manner that is consistent with the patent's specification. *See Markman*, 52 F.3d at 979 ("Claims must be read in view of the specification, of which they are a part."). Often the specification is the best guide for construing the claims. *See Phillips*, 415 F.3d at 1315 ("The specification is . . . the primary basis for construing the claims."). *See also Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996) ("[T]he specification is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term."). Thus, the specification may be used to limit the meaning of a claim term that otherwise would appear to be susceptible to a broader reading. *SciMed Life Sys., Inc. v. Advanced Card. Sys., Inc.*, 242 F.3d 1337, 1341 (Fed. Cir. 2001). For example, the specification may provide a definition for a claim term that departs from the term's ordinary and customary meaning. *Phillips*, 415 F.3d at 1316. In addition, by distinguishing prior art the "the specification may reveal an intentional disclaimer, or disavowal, of claim scope by the inventor." *Id.* 

A final source of intrinsic evidence is the prosecution record and any statements made by the patentee to the PTO regarding the scope of the invention. *See Markman*, 52 F.3d at 980. "Like the specification, the prosecution history provides evidence of how the PTO and the inventor understood the patent." *Phillips*, 415 F.3d at 1317. For example, statements that distinguish a claim from the prior art may narrow the scope of a disputed term. *See*, *e.g.*, *Omega Eng'g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1323 (Fed. Cir. 2003) ("The doctrine of prosecution disclaimer . . . preclud[es] patentees from recapturing through claim interpretation specific meanings disclaimed during prosecution"). In addition, assertions made during the prosecution of related patent applications may prove relevant. *See Goldenberg v. Cytogen, Inc.*, 373 F.3d 1158, 1167 (Fed. Cir. 2004). For example, when multiple related patents descend from an initial "parent" application, any disclaimers made during the prosecution of the parent application will apply to any later-filed applications that contain the same claim limitation. *See Elkay Mfg. Co. v. Ebco Mfg. Co.*, 192 F.3d 973, 980 (Fed. Cir. 1999). However, because the prosecution history

reflects an ongoing negotiation between the patentee and the PTO, it often is difficult to determine with exact precision the scope or meaning of particular statements. *Phillips*, 415 F.3d at 1317. Thus, the prosecution history usually is accorded less weight than the claims and the specification. *Id*.

The Court also may consider extrinsic evidence, such as dictionaries or technical treatises, especially if such sources are "helpful in determining 'the true meaning of language used in the patent claims." *Phillips*, 415 F.3d at 1318, quoting *Markman*, 52 F.3d at 980. However, while extrinsic evidence may aid the claim construction analysis, it cannot be used to contradict the plain and ordinary meaning of a claim term as defined within the intrinsic record. *Phillips*, 415 F.3d at 1322-23.

#### III. DISCUSSION

#### A. "File" and "Initialization File"

The term "file" is found in all of the asserted independent claims; "initialization file" is found in asserted claims 1 and 17 of the '532 patent and claim 1 of the '863 patent. While "initialization file" was construed by Judge White in the *Microsoft* case, "file" has not been construed previously.

#### 1. "Initialization File"

Judge White construed "initialization file" as "a file which, alone or in combination with other file(s), contains information or data used or referenced to start up or configure software and/or hardware." TVI adopts this construction. Defendants initially proposed a construction adding limitations that the initialization file "is not (1) loaded into memory (2) used to perform further processes, or (3) used as a driver." At the claim construction hearing, Defendants proposed replacing the "(2)" in their proposed construction with the word "and," so that the additional limitations would be that the file "is not (1) loaded into memory *and* used to perform a

<sup>&</sup>lt;sup>3</sup> Defendants' construction in its entirety reads, "a file which, alone or in combination with other file(s), contains configurable information or data used or referenced to start up or configure software and/or hardware, which is not (1) loaded into memory (2) used to perform further processes, or (3) used as a driver." Joint Claim Construction and Prehearing Statement ("JCCPS") Ex. A.

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further process, or (2) used as a driver." Transcript of Claim Construction Hearing Feb. 22, 2011 (Dkt. 279) ("Transcript") 74:4-8.

Judge White rejected Microsoft's proposed construction of "initialization file" as "an autostart driver, i.e. a device driver capable of automatically starting a process." *Microsoft*Claim Construction Order 5:14-15. He concluded that "an initialization file is something that is only used to configure a program or system when it is started. An initialization file's role is completed once these instructions are read and used." *Id.* 6:19-21. He explained that while "[t]he result of these instructions can be the loading of a particular driver," the initialization file "is not 'loaded' into memory and used to perform a further process." *Id.* 

TVI asserts that an initialization file cannot be used as a driver or used to perform further ongoing processes after the startup and configuration of a program or system. Pl.'s Reply Claim Construction Brief at 3. At the claim construction hearing, Defendants agreed that an initialization file may be loaded into memory but may not be "loaded into memory *and* used to perform further ongoing process." Transcript 74:4-8, 77: 20-22. Accordingly, the parties disagree not as to the substantive limitations of an "initialization file," but only as to the appropriate language for capturing those limitations.

TVI observes correctly that the claim language, specification, and prosecution history all indicate that an initialization file may be "loaded into memory." The claim language explicitly makes reference to "automatically *loading* an initialization file." *See, e.g.*, '532 claim 1 (emphasis added). The specification also identifies CONFIG.SYS as an example of an initialization file in the IBM PC. '532 21:66-22:6. As TVI points out, one of ordinary skill in the art would understand that CONFIG.SYS is loaded (copied into memory) during startup of an IBM PC. The examiner also adopted this view during reexamination, noting that initialization files such as CDTV's ROM modules "are loaded into memory." Chan Decl., Ex. 10 at 33.

TVI claims that the definition adopted by the *Microsoft* court is sufficient to distinguish an initialization file from an autostart driver without imposing limitations that are not present in the claim language or specification. However, making the limitations upon which the parties agree explicit in the definition may provide additional clarity going forward. The Court

referenced" in any appropriate manner-including being copied into memory-during start up and

configuration, but that it is not used to perform any further processes after start up, nor is it used

as a driver. The Court construes the term "initialization file" to mean: a file which, alone or in

combination with other file(s), contains information or data used or referenced to start up

or configure software and/or hardware and is not then used to perform a further process

therefore adopts additional language indicating that an initialization file may be "used or

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2. "File"

or used as a driver.

TVI proposes that "file" be construed as "a set or block of electronic information treated as a unit." Defendants' proposed construction is: "a complete named collection of information, constituting a basic unit of storage that enables a computer to distinguish one set of information from another, which is not machine code or a module within read-only or non-volatile memory." Defendants' proposed construction includes the additional limitations that a "file" (1) must have a name and (2) cannot be machine code or a module within read-only memory or non-volatile

memory (ROM).

#### Whether a "file" must have a name a.

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During the claim construction hearing, the parties moved closer together with respect to whether a file always must have a name. TVI acknowledged that while the claim language specifies that certain files must have "predetermined names," other files could be referenced by other means—such as an address pointer—without affecting the operation of the invention. Defendants then proposed amending their proposed construction from "a complete named collection of information, . . . " to "a complete identified collection of information, . . . . " TVI countered by expressing a preference for "identifiable" rather than "identified."

To the extent that any dispute remains between the parties as to this point, it involves whether the set of information constituting a file must have been identified previously or merely must be identifiable. The definitions offered by the parties make clear that the key attribute of a file is that it is "treated as a unit" by the host device, see JCCPS Ex. B at 10, and is "the basic unit of storage that enables a [host device] to distinguish one set for information from another,"

1 JCCPS Ex. C at 7. It follows that the host device must be able to recognize the set of 2 information constituting the file as a distinguishable unit. As a matter of common sense, the host 3 device must have a means of identifying that set of information such as a name, an address pointer, or something else. However, it would be imposing an additional limitation on the term 4 5 to require that all such sets of information be identified in advance in a particular way. The 6 claim language is careful to designate those files that must have "predetermined" identifiers. 7 The Court concludes that a file must be "identifiable" but need not be "identified" or have a

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name.

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### Whether a "file" can be machine code or a module in ROM

Nothing in the claim language or specification indicates that a file cannot be written in machine code or be a module in ROM, nor does any of the dictionary definitions provided by the parties. In fact, one of the definitions offered by Defendants states expressly that "[a] file might not be stored in human-readable form." JCCPS, Ex. C at 8. Defendants nonetheless point to TVI's argument in the *Microsoft* case that ROM modules are blocks of machine code that could not be classified as "files," and that machine code in ROM cannot constitute a "file" because machine code is the software itself. Finn Decl. Ex. F (Rebuttal Report of Christian B. Hicks) at 8-9 ("[S]omething that is not a file cannot be an "initialization file" . . . . the bytes stored in ROM on the Amiga are not stored in files. . . . the Amiga ROM has no file system . . . and machine code read from the ROM is no file at all."). However, although TVI does not dispute that it made that argument, it claims that neither Judge White nor the patent examiner accepted it and that TVI later conceded the point. See Pl.'s Claim Construction Brief 6.

Defendants contend that because TVI argued previously that modules in the ROM of CDTV are not files, it should be estopped from arguing otherwise before this Court. They assert that TVI survived summary judgment in the *Microsoft* case at least in part because it created an issue of material fact as to whether ROM modules are files.<sup>4</sup> However, as noted above, Judge

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<sup>&</sup>lt;sup>4</sup> Defendants cite the transcript of the hearing on Microsoft's motion for summary judgment, in which Judge White questioned TVI's counsel as to whether a genuine issue of material fact existed. See Defs.' Claim Construction Brief at 11 (quoting Microsoft case, Tr. of

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8/6/04 Summ. J. Hearing, at 69-70).

During reexamination of the Redford patents, the examiner found that the ROM modules

in CDTV are files as that term is used in the patents. Chan Decl. Ex. 10 at 33. ("The Examiner finds persuasive the deposition of . . . a primary architect of the CDTV and Amiga systems, who explained in sworn deposition testimony how the files in the CDTV ROM, sometimes referred to as 'modules," are loaded into memory."). TVI did not dispute the point: "[a]s stated in the Order ... in the CDTV manual the initialization files are contained in the operating system stored in ROM . . . and these initialization files are automatically loaded when the system boots." *Id.*, Ex. 11 at 4. Defendants contend that the examiner's broad construction of "file" is entitled to less deference here because the PTO must engage in the "broadest reasonable construction" of claim terms, while a court in the context of litigation may apply a narrower standard. However, prosecution history is valuable in claim construction precisely because it "provides evidence of how the PTO and the inventor understood the patent." *Phillips*, 415 F.3d at 1317. While it is true that the PTO and courts "take different approaches in determining invalidity," the Federal Circuit has recognized that reexamination can "provide valuable analysis to the district court, which it could consider in reaching its determination." Ethicon, Inc. v. Quigg, 849 F.2d 1422, 1428 (1988) (holding that reexamination should not be suspended pending litigation) (internal citations omitted). Here, the file history does not support Defendants' contention that "file," as used in the Redford patents, excludes machine code or modules in ROM.

Finally, Defendants argue that even if estoppel is not appropriate, the testimony of TVI's expert in the *Microsoft* case is persuasive evidence of how one of ordinary skill in the art would understand the meaning of "file." This Court has no reason to doubt that TVI's expert is one skilled in the relevant art. However, "extrinisic evidence consisting of expert reports and

testimony [that] is generated at the time of and for the purpose of litigation . . . can suffer from bias that is not present in the intrinsic evidence." *Phillips*, 415 F.3d at 1318. Moreover, other persons skilled in the art, including the "primary architect of the CDTV and Amiga systems" and the patent examiner himself, came to a contrary conclusion as to whether a file can be machine code or a module in ROM. In light of the lack of support for Defendants' proposed limitations in the claim language, specification, file history or dictionary definitions, the opinion offered by TVI's expert in the *Microsoft* case is unpersuasive.

The Court construes "file" according to its ordinary meaning in the art as: a complete, identifiable collection of information, constituting a basic unit of storage that enables a computer to distinguish one set of information from another.

#### B. "Loading" and "Means for Automatically Loading an Initialization File"

Neither "loading" nor "means for automatically loading an initialization file" has been construed previously. The phrase "means for automatically loading an initialization file" is found in claim 1 of the '156 patent and in claim 1 of the '863 patent. "Loading" also appears in claim 17 of the '532 patent, claims 1 and 18 of the '307 patent, and claim 1 of the '156 patent.

#### 1. "Loading"

TVI initially contended that "loading" be construed as "using or placing into memory," while Defendants propose that the term be construed as "copying into random access memory." However, in its reply brief, TVI agreed with Defendants' proposal that "loading" be construed as "copying into memory." Pl.'s Reply Brief, 11:23-24. At the claim construction hearing, Defendants agreed to withdraw the limitation that a file be copied into "random access memory." Transcript, 11:9-13. Accordingly, the Court construes "loading" as: **copying into memory**.

#### 2. "Means for Automatically Loading an Initialization File"

The parties agree that the phrase "means for automatically loading an initialization file" is a means-plus-function limitation governed by 35 U.S.C. § 112(6).<sup>5</sup> Construction of means-

<sup>&</sup>lt;sup>5</sup> Puruant to 35 U.S.C. § 112(6), "[a]n element of a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material or acts in support thereof, and such claims shall be construed to cover the corresponding

plus-function terms involves two steps: (1) a court must identify the claimed function, which
most often is simply the function recited in the claim following "means"; and (2) a court must
locate in the intrinsic record the precise structure that the patent identifies as corresponding to
the recited function. Biomedino, LLC v. Waters Techs. Corp., 490 F.3d 946, 950 (Fed. Cir.
2007). "In order to qualify as corresponding, the structure must not only perform the claimed
function, but the specification must clearly associate the structure with performance of the
function." Cardiac Pacemakers, Inc. v. St. Jude Med., Inc., 296 F.3d 1106, 1113 (Fed. Cir.
2002). "[A] means plus function limitation must be disclosed in the written description in such a
manner that one skilled in the art will know and understand what structure corresponds with the
means limitation." Atmel Corp. v. Information Storage Devices, 198 F.3d 1374, 1382 (Fed. Cir.
1999).

The parties agree that in this instance the claimed function is "automatically loading an initialization file." TVI contends that this language corresponds to the following description in step 505 of the specification:

Then host device 120 goes via branch 504 to step 505 where host device 120 boots the operating system from a storage media, wherein the storage media containing the operating system can either be a removable storage media (such as a floppy disk) or a permanent storage media which is an integral part of host device 120 (such as a hard drive). During booting, host 120 checks for initialization files such as startup files and configuration files. On finding a valid initialization file, host device 120 uses the initialization file during booting. Then host device 120 goes via branch 506 to step 507 where host device 120 installs an autostart driver (such as driver 436) in main memory (such as memory 435).

'532 22:13-23 (emphasis added). Accordingly, TVI contends that the corresponding structure for accomplishing the means identified in the claim is "a host device programmed and/or configured to perform the disclosed algorithm of checking for and using an initialization file during booting from either a removable storage media (such as floppy disk) or a permanent storage media which is an integral part of the host device, and equivalents thereof."

Defendants argue that there is no structure in the specification clearly associated with such a function, and that the claims that recite this limitation are invalid because they do not

structure, material, or acts described in the specification and equivalents thereof."

satisfy the particularity requirement of 35 U.S.C. § 112(2). Initially, Defendants asserted that the only structure in the specification that loads *any* file automatically is the installation of the autostart driver during the start-up of the host device. Defendants therefore suggested that the Court find the corresponding structure to be "a host device programmed so that it executes the algorithm illustrated by the flow chart of FIG. 5A, where during booting the host device executes an instruction that loads the initialization file." However, at the claim construction hearing, while standing by their view that no structure in the specification meets the requirements of 35 U.S.C. § 112(6) or the particularity requirement of 35 U.S.C. § 112(2), Defendants agreed that TVI's proposed structure "is the only structure in the specification that *could* support that means plus function term," Transcript 141:15-18 (emphasis added).

Defendants have expressed their intent to file a motion for summary judgment with respect to whether the claimed structure satisfies the requirements of 35 U.S.C. § 112. The parties appear to agree that *if* the specification describes a structure that performs the function of "automatically loading an initialization file," it is the structure identified by TVI, and TVI has indicated that it does not intend to rely on any other structure. Transcript 137:13-138:25. The Court therefore will adopt TVI's construction, but in so doing it makes no determination as to the legal sufficiency of the proposed structure pending further briefing by the parties.

The Court concludes that "automatically loading an initialization file" corresponds to step 505 in the specification, and that the structure associated with performing that function is: a host device programmed and/or configured to perform the disclosed algorithm of checking for and using an initialization file during booting from either a removable storage media (such as floppy disk) or a permanent storage medium which is an integral part of the host device, and equivalents thereof.

C. "First Means for Checking for a File of a First Predetermined Name" and "Second Means For Checking for a File of a Second Predetermined Name"

The phrases "first means for checking for a file of a first predetermined name" and "second means for checking for a file of a second predetermined name" both are found in claim 9 of the '863 patent. Neither has been construed previously. The parties agree that both are

means-plus-function limitations governed by 35 U.S.C. § 112(6), and that the claimed functions are "checking for a file of a first predetermined name" and "checking for a file of a second predetermined name." However, the parties disagree as to the corresponding structures.

TVI asserts that the corresponding structure for "checking for a file of a first predetermined name" is "a host device (e.g. computer) programmed and/or configured to perform the disclosed algorithm of using the first predetermined name to determine if a file with the name is present in or accessible from the storage media, and equivalents thereof."

Defendants' proposed corresponding structure is "a host device (as construed) programmed to perform the disclosed algorithm for initially seeking, upon detection of a storage media insertion into the peripheral, a security key file of a predetermined name on the detected storage media, and equivalents thereof." Similarly, TVI contends that the correct corresponding structure for "checking for a file of a second predetermined name" is "a host device (e.g. computer) programmed and/or configured to perform the disclosed algorithm of using the second predetermined name to determine if a file with that name is present in or accessible from the storage media, and equivalents thereof." Defendants' proposed corresponding structure is "a host device (as construed) programmed to perform the disclosed algorithm for seeking, upon confirming a valid security key in the file of the first predetermined name, a batch file of a predetermined name on the detected storage media, and equivalents thereof."

Essentially, the parties' dispute concerns the degree of specificity required in order for the structures to correspond to the functions asserted in the claim. "[A] means plus function limitation must be disclosed in the written description in such a manner that one skilled in the art will know and understand what structure corresponds with the means limitation." *Atmel Corp. v. Information Storage Devices*, 198 F.3d 1374, 1382 (Fed. Cir. 1999). Defendants argue that the one skilled in the art would understand from the specification that the "file of a first predetermined name" is a certain type of file—a security key file—and that the "file of a second predetermined name" is another particular type of file—an executable batch file. Defendants suggest that without such limitations the terms would be so broad that the claim would be invalid under 35 U.S.C. § 112(2). TVI contends that Defendants' proposed structures improperly read

limitations from the specification into the claims.

The specification states that:

In one embodiment of this invention, files with first and second predetermined names (such as DISGOKEY.EXE and DISGO.BAT) are present in a set of storage medias [sic] released by licensees of the owner of this patent.

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In decision box 517 autostart driver 510 checks to see if a file of a first predetermined name DISGOKEY.EXE is accessible from the removable storage media peripheral which caused the interrupt. If DISGOKEY.EXE is not accessible, autostart driver goes via branches 531 and 532 back to step 515 (described above).

If DISGOKEY.EXE is accessible in the removable storage media peripheral which caused the interrupt, autostart driver 510 goes via branch 518 to step 519. In step 519, autostart driver 510 checks to see if a security key is present in a file of a first predetermined name on the storage media.

156 21:42-46, 22:19-33.

"A court may not import into the claim features that are unnecessary to perform the claimed function. Features that do not perform the recited function do not constitute corresponding structure and thus do not serve as claim limitations." *Northrop Grumman Corp. v. Intel Corp.*, 325 F.3d 1346, 1352 (Fed. Cir. 2003) (internal citation omitted). The parties agree that the only recited function for the "first means" is "checking for a file of a first predetermined name." It is clear from the specification that the process of checking for a file of a first predetermined name is completed within decision box 517. Step 519–checking to see if a security key is present *in* a file of a first predetermined name—is not a part of the recited function and thus is not a claim limitation. Where TVI intended to claim a structure related to the security keys disclosed in the specification, it did so expressly. For example, in claim 5 of the '156 patent, TVI claimed a "means for comparing a key stored in said file of said first predetermined name with a hard coded key" separately from the "first means for checking for a file of a first predetermined name." *See* '156 claim 5.

The Court concludes that the structure linked to the function recited in the claim is: a

<sup>&</sup>lt;sup>6</sup> The Court need not address at this juncture Defendants' contention that TVI's proposed definition renders the claim invalid under 35 U.S.C. § 112(2). While claims should be construed to preserve their validity, the Court may not redraft claims in that purpose. *Chef Am. Inc. v. Lamb-Weston, Inc.*, 358 F.3d 1371, 1374 (Fed. Cir. 2004).

host device (e.g. computer) programmed to perform the disclosed algorithm of using the first predetermined name to determine if a file with the name is presented in or accessible from the storage medium, and equivalents thereof.

The specification also provides that:

In decision box 524, autostart driver 510 checks to see if a file of second predtermined name DISGO.BAT is accessible from the removable storage media peripheral which caused the interrupt. If DISGO.BAT is not accessible, autostart driver 510 goes via branches 525 and 532 back to step 515 (described above) If DISGO.BAT is accessible in the removable storage media peripheral which caused the interrupt, autostart driver 510 goes via branch 526 to step 527.

156, 22:46-54.

The parties agree that the only recited function for the "second means" is "checking for a file of a second predetermined name." From the above language, it is apparent that the process of checking for a file of a first predetermined name is completed within decision box 524. At the same time, both the claim language and the specification provide specific content for a "file of a second predetermined name." The claim requires a "means for starting up a process from said file having said predetermined name," and that "said means for starting up" must "contain a sequence of instructions to be executed to start up said process in response to said second means of checking finding said file of said second predetermined name." '863, claim 9. The specification states that "[e]very file having a second predetermined name . . . contains a sequence of application start-up instructions to be executed to start an application." '156, 21:51-55. The specification also states that "[a]t the very least, a file with second predetermined name . . . must be present on a storage media to be compatible with an autostart driver which seeks a file of the second predetermined name." *Id.* 21:46-50.

While the claim language and specification require that "a file of a second predetermined name" contain a sequence of instructions for starting a process, the construction of that phrase is distinct from the means associated with performing the function of "checking for" a file of that name. With respect to means-plus-function terms, the Federal Circuit has observed that "[f]eatures that do not perform the recited function do not constitute corresponding structures and thus do not serve as claim limitations." *Northrop Grumman Corp.*, 325 F.3d at 1352. For

example, the passage through which a slug travels "is not the means that causes the passing, *O.I. Corp. v. Tekmar Co.*, 115 F.3d 1576, 1581 (Fed. Cir. 1997), and signals that are generated by "the means for monitoring," are not part of the structure that performs the function of "generating . . . control signals," *Northrop Grumman Corp.*, 325 F.3d at 1452-53. Analogously, the content of the "file of a second predetermined name," cannot be part of the structure of the "means for checking for a file of a second predetermined name."

The Court concludes that the structure linked to the function recited in the claim of checking for a second determined name is: a host device (e.g. computer) programmed and/or configured to perform the disclosed algorithm of using the second predetermined name to determine if a file with that name is present in or accessible from the storage medium, and equivalents thereof.

# D. "Said file other than said initialization file having a predetermined name that is compatible with said initialization file"

This phrase is found in asserted claims 1 and 17 of the '532 patent and claim 1 of the '863 patent.<sup>7</sup> It has not been construed previously. TVI proposes that it be construed as a "file having a predetermined name, which name is consistently used by the initialized host device to seek a file." Defendants' proposed construction is "the file having a name which is determined ahead of time that is started up by an Initialization File (as construed)." The parties' dispute involves the meaning of the words "compatible with."

Defendants contend that, as used in the specification, "compatible with" means "started up by." They point out that the only reference in the specification to a file being "compatible" with something else is the statement that "a file with second predetermined name (such as DISGO.BAT) must be present on a storage media to be *compatible with an autostart driver* 

<sup>&</sup>lt;sup>7</sup> Claim 1 of the '532 patent discloses a method including the step of "starting up said process, wherein a process is started each time said checking step finds *a file having a predetermined name that is compatible with said initialization file* and containing a sequence of instructions to be executed to start up a process." Claim 1 of the '863 patent discloses a device including "means for checking said storage media for a file other than said initialization file, said *file other than said initialization file having a predetermined name that is compatible with said initialization file* containing a sequence of instructions to be executed to start up a process...."

which seeks a file of the second predetermined name DISGO.BAT in accordance with this invention." Because the parties have adopted the *Microsoft* court's determination that the initialization file is distinct from the autostart driver and does not perform further ongoing processes, Defendants contend that no file is compatible with the initialization file in the sense that the term is used in the specification with reference to the autostart driver. Defendants argue that the only reasonable construction of the phrase thus renders the claims in which it appears invalid as unsupported and indefinite under 35 U.S.C. § 112(1)-(2).

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According to TVI, compatibility is "[t]he ability of two or more systems or components to perform their required functions while sharing the same hardware or software environment." The New IEEE Standard Dictionary of Electrical and Electronic Terms 222 (5th ed. 1993). In line with this technical definition, TVI argues that "compatible" means "capable of existing or operating together in harmony." Webster's Ninth New Collegiate Dictionary 268 (1983). Indeed, as TVI suggests, the ordinary understanding of "compatible" is that two things are designed to work together. Nothing in that understanding leads to the conclusion that the file of a predetermined name and the initialization file must work together directly or in a particular way, nor does it follow that a file must be loaded by another file in order to be compatible with The question thus is whether the inventors use "compatible with" in a way that evidences it. their intent to limit the claim terms. See Arlington Indus. v. Bridgeport Fittings Inc., 632 F.3d 1246, (Fed. Cir. 2011) ("[E]ven where a patent describes only a single embodiment, claims will not be read restrictively unless the patentee has demonstrated a clear intention to limit the claim scope using words or expressions of manifest exclusion or restriction"). Here, there is no indication that the specification uses "compatible with" other than in its ordinary meaning. While it is true that a file with a specific name must be present on the storage medium to be compatible with an autostart driver that seeks a file of that name, the specification does not indicate that it is that fact that defines the extent of compatability. The specification also states that "a user can place a storage media [sic] (such as CD-ROM 110) into a compatible peripheral of a powered up and booted host device." '532 21:53-56 (emphasis added). In this context, "compatible with" appears to be used in the sense of "capable of functioning in the same

hardware or software environment."

TVI's proposed construction of "file having a predetermined name, which name is consistently used by the initialized host device to seek a file," captures the claim's requirement that the file be compatible with the initialization file. In the embodiment described in the specification, the initialization file, autostart driver, and file on the storage medium all must be designed to operate in harmony. The name of the file on the disk must be the same as the one the initialization file has installed an autostart driver to seek; if they are not the same, the invention will not work. For purposes of the invention, it does not matter that the autostart driver acts as an intermediary between the initialization file and the file on the storage media.

Defendants raise two concerns with TVI's proposed construction. First, they contend that in the embodiment described in the specification, the focus is placed on the compatibility between the file name on the storage medium and the autostart driver rather than on the compatibility of the file name on the storage medium and the initialization file. However, as TVI points out, the patent expressly contemplates embodiments that do not include an autostart driver. '532 24:28-32. While in one embodiment the intermediary of the autostart driver enables the files to work together in one embodiment, the claims of the patent are not limited to that embodiment.

Second, Defendants point out that the *Microsoft* court declined to read "consistently used in the autostart driver and in compatible storage media" into the definition of "predetermined name." *Microsoft* Claim Construction Order at 13. Judge White reasoned that adding additional limitations into the general term "predetermined name" was unjustified because "TVI could have easily added additional limitations in the claims if they had intended a more specific definition of the term." *Id.* at 13-14. However, this Court must construe not "predetermined name," but "said file other than said initialization file having a predetermined name that is compatible with said initialization file," and the latter phrase includes a limitation that the "predetermined name" be "compatible with said initialization file."

Consistent with the foregoing, the Court construes "said file other than said initialization file having a predetermined name that is compatible with said initialization file" as: **a file having** 

a predetermined name, which name is consistently used by the initialized host device to

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seek a file.

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## E. "Returning to Said Step of Automatically Enabling"

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The phrase "returning to said step of automatically enabling" is found in claims 1 and 18 of the '307 patent.<sup>8</sup> Judge White construed this phrase as "returning to a state in which the host device (e.g. computer) is prepared to process requests for attention to or from hardware and/or software." TVI asks the Court to adopt this construction. Defendants propose that the phrase be construed as "re-enabling a previously disabled interrupt to detect another removable storage media associated with the peripheral."

Defendants' proposed construction adds the additional limitations of (1) disabling the interrupt and (2) re-enabling the interrupt. Judge White rejected similar language proposed by Microsoft,<sup>9</sup> both because the proposed construction imported limitations from the specification into the claim language and because the proposed construction reads a limitation found in a dependent claim into an independent claim.

Defendants contend that the specification teaches explicitly that the driver disables the

A method of automatically starting up a process in a host device based on insertion of a storage media into a peripheral, comprising:

booting an operating system of the host device, said step of booting including checking for an initialization file;

automatically enabling an interrupt;

automatically checking for a file other than said initialization file in at least one removable storage media associated with at least one peripheral on occurrence of said interrupt, said removable storage media being encoded with electronic content including said file;

automatically loading at least a portion of the electronic content from said removable storage media in response to finding said file during said step of automatically checking;

automatically executing an application identified by or associated with said file; and

returning to said step of automatically enabling without rebooting the host device.

<sup>&</sup>lt;sup>8</sup> Claim 1 of the '307 patent reads:

<sup>&</sup>lt;sup>9</sup> Microsoft's proposed construction of the phrase was "after having previously disabled the interrupt, re-enabling the interrupt." *Microsoft* Claim Construction Order, 22:16-17.

interrupt before returning to the "step of automatically enabling the interrupt." See '532 FIG. 5B step 527 ("store the peripheral name in variable X and disable interrupts from removable storage media peripherals enabled in 513"). They argue that it was standard practice at the time of the invention to disable the interrupt before the performance of the associated interrupt service routine so that the interrupt would not re-fire and disrupt the routine's processing. See Microsoft Press Computer Dictionary, 220-21 (2d ed. 1994) ("If a constant stream of interrupt requests would disrupt or complicate processing at a critical point, a program can temporarily disable interrupts, effectively gaining control of the microprocessor's attention for the time needed."). They also suggest that "returns" to a step of "enabling an interrupt" implies that the interrupt first is disabled prior to returning and that returning to the step of enabling the interrupt is distinguished from returning to the step of waiting for the interrupt. See '532 Fig. 5C.

As Judge White recognized, limitations from the specification cannot be read into the claims "where the patentee has not demonstrated a clear intention to limit the claim scope using words or expressions of manifest exclusion or restriction," *see Arlington Indus.*, 632 F.3d at 1246. The Federal Circuit only has reinforced this teaching since the *Microsoft* claim construction was issued. *See, e.g., id.* (reversing the district court for importing limitations from the drawings and specification because "[w]here a specification does not require a limitation, that limitation should not be read from the specification into the claims"). Nothing in the claim language or the dictionary definition cited by Defendants justifies the importation of limitations from the specification.

Claim 16 of the '307 patent describes "[t]he method of claim 1 further comprising disabling said interrupt prior to said step of automatically executing said file." TVI argues, consistent with Judge White's analysis, that Defendants' proposed construction violates the doctrine of claim differentiation under which "each claim in a patent is presumptively different in scope." Defendants claim that their proposed construction is appropriate because claim 16 indicates *when* the interrupt is disabled ("prior to said step of automatically executing said file") while claim 1 does not. However, the only reason articulated by Defendants as to why the interrupt must be disabled is to avoid interrupting the execution of the file. Because there is no

reason to disable the interrupt after the file is executed, it is reasonable to construe claim 16 as demonstrating that the patentees knew how to include a limitation of disabling the interrupt, chose to include such a limitation in claim 16, and chose not to include the limitation in claim 1. Moreover, the definition upon which Defendants rely is conditional: "If a constant stream of interrupt requests would disrupt or complicate processing at a critical point, a program *can* temporarily disable interrupts." As claim 16 indicates, the inventors knew this, yet they chose not to state that it is necessary in every case to disable the interrupts.

The Court construes "returning to said step of automatically enabling" as: returning to a state in which the host device (e.g. computer) is prepared to process requests for attention to or from hardware and/or software.

## F. "Without Rebooting the [Host] Device"

The phrase "without rebooting the [host] device" is found in claim 1 of the '307 patent and claims 1, 9, and 17 of the '532 patent. The phrase has not been construed previously. TVI's proposed construction is: "without (1) resetting or restarting the [host] device or (2) reloading or restarting an operating system in the [host] device." Defendants propose that the phrase be construed to mean "[without] a process of clearing memory or initializing hardware of a device that includes a waiting time before an application can be accessed by a user."

TVI asserts that "rebooting" is a term well-known among those with ordinary skill in the art, and it offers several definitions consistent with its proposed construction. *See* JCCAPS, Ex. B, 12-15. Defendants do not rely upon any dictionary definitions, contending instead that TVI adopted their proposed definition in the *Microsoft* case and thus should be estopped from arguing for a different result here.

At the claim construction hearing, Defendants also contended that claim 16 is defective because it indicates that the interrupt is disabled prior to the step of "automatically executing said file" but does not recite a step of automatically executing said file (instead reciting a step of "executing an application identified by or associated with said file"). However, even if claim 16 were invalid, that fact would not affect the logic of the differentiation argument adopted by the *Microsoft* court and advanced by TVI here. "The interpretation to be given a term can only be determined and confirmed with a full understanding of what the inventors actually invented and *intended to envelop* with the claim." *Phillips*, 415 F.3d at 1316 (emphasis added).

According to Defendants, TVI distinguished the invention disclosed in the Redford patents from CDTV because CDTV

requires a reboot/reset when the user changes to a disc with a different application. During this reboot/reset, *memory is cleared, the hardware is initialized*, and the system goes to a 'clean slate.' Resetting the system is the cleanest method of providing a clean slate for the next application because CDTV applications are self-booting and set up their own execution environment.

*Microsoft* case, EX. 4 to TVI's Opp. To Microsoft's Summ. J. Mtn. Re CDTV, Rebuttal Report of Hicks, at 7 (internal quotation marks and citations omitted) (emphasis added); Finn Decl. Ex. F. Defendants also claim that TVI represented repeatedly that "rebooting" involves a delay before a user can access an application. *See* '532 2:16-19.

TVI argues that rebooting is more than merely a "process of clearing memory or initializing hardware of a device." It contends that the closing of any open application results in "a process of clearing memory," and that a person of ordinary skill in the art would not understand closing an application to require rebooting a computer. Similarly, it asserts that processors can initialize hardware in many ways—such as plugging in a USB device—that do not require a reboot. TVI contends that taken in its proper context, its evidence in the *Microsoft* case showed that the entire CDTV system is reset when the user changes disks, which means *all* of its memory is cleared and *all* of its hardware reinitialized. TVI asserts that it never has claimed that all processes of clearing memory or initializing of hardware constitute a reboot.

TVI also argues that Defendants' assertion that rebooting must include "a waiting time before an application can be accessed by a user" is ambiguous. It notes that if any waiting time, even milliseconds, can satisfy the limitation, then there is no limitation at all. On the other hand, TVI suggests that there is no basis upon which to impose a limitation of a precise waiting time.

TVI argues persuasively that a person of ordinary skill in the art understands rebooting as resetting or restarting a host device or reloading or restarting an operating system in a host device. This construction is consistent with the dictionary definitions cited, and it also is consistent with the statements made by TVI's expert in the *Microsoft* case. In fact, anyone with a passing familiarity with computers is familiar with this meaning of the term "reboot." Defendants' proposed construction creates unnecessary ambiguities with respect to the amount

of memory that must be cleared and the amount of waiting time involved in a reboot.

The Court construes "without rebooting the [host] device" in light of its ordinary meaning as "without (1) resetting or restarting the [host] device or (2) reloading or restarting an operating system in the [host] device."11

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IV. ORDER

The disputed terms of the Redford patents are hereby construed as set forth above.

IT IS SO ORDERED.

DATED: April 15, 2011

JEREMY FOGEI United States District Judge

<sup>11</sup> Defendants also argue that because TVI expressly disclaimed all "boot" art systems in the *Microsoft* case, every asserted claim must be read to include the "without rebooting" limitation. TVI acknowledges that "the invention does exclude boot art." Pl.'s Reply Brief 24:24-25. However, it also cites the Microsoft court's conclusion that "[r]ebooting and reinitializating the entire system after each insertion of media is not simply an additional series of steps it is more accurately a series of operations not contemplated by the construction of TVI's claims." Id. (quoting Microsoft Order Denying Motion for Summary Judgment on Anticipation at 2). Because Defendants have not shown that TVI has taken an inconsistent position, there is no basis for judicial estoppel.